

Reliability and Validity of Translated Multicultural Course Racial Experiences Inventory (MCREI) on the sample of Malaysian Counsellor Trainees

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Abstract

Multicultural experiences can be conceptually connected to counsellor trainees' perception of the multicultural exposure and interaction that they experienced during the multicultural counselling course. The degree of counsellor trainees multicultural experience may reflect the status and focus of the multicultural counselling course. Therefore, the objective of this study is to investigate the factor structure, reliability, and validity of the Malay version of the MCREI. There are 205 counsellor trainees from local universities who completed the questionnaire. Based on factor analysis, the four-factor structure, the same as the original version was confirmed with 12 items were retained. For reliability, internal consistency and construct reliability were evaluated and confirmed. The finding showed that the internal consistency was $\alpha = .842$ and construct reliability of .837. The convergent validity value obtained from the confirmatory factor analysis was .574. In addition, an external validity value is also provided. Overall, the factor structure, reliability, and validity of the Malay version of the MCREI were all confirmed in this study. The high reliability and proven validity imply that MCREI can successfully be used by counsellor trainees across gender and ethnicity.

Keywords: Multicultural Experience, Multicultural Counselling Course, Counsellor Trainees, Reliability, Validity.

Introduction

A person may take for granted that their way of life is the way things are if they never experience other culture (Donohue, 2020). This must not be the case for counsellor trainees or else culturally insensitive practice may harm their clients. To be a competent counsellor, counsellor trainees should be aware of the importance of multicultural experience. The multicultural experience provides a layout of a bigger picture in understanding themselves. Individuals' present self, their thinking, feeling, and behaviour mostly influenced by their multicultural experience, of what they perceive, and digest from their environment.

Multicultural experience can be regarded as collected cross-cultural experiences encounter (Narvaez & Hill, 2010). According to Contact Theory (Allport, 1954), contact between individuals of different groups can lead to positive outcomes (e.g., lower prejudice, openness, empathy, etc.). This kind of contact is also the accumulation of intercultural encounters (Narvaez & Hill, 2010). Leung et al. (2008) described multicultural experiences as all direct and indirect experiences of encountering or interacting with the elements and/or members of foreign cultures. Multicultural experiences allow an individual to encounter viewpoints that contrast with the indigenous culture and can lead to an adjustment in thinking, a broadening of perspective, and greater cognitive flexibility (Narvaez & Hill, 2010). Greater multicultural experience typically fosters improved multicultural competencies, including cognitive and behavioural flexibility, empathy, openness to new experiences and people, and tolerance for ambiguity (Paige, 1996).

To measure the studied forms of experience, researchers often included them in the demographic sheet. Direct clinical/counselling, training experiences in a graduate program (Na Go Eun, 2012; Barden & Greene, 2015), and working or professional experience (Crook, 2010; Adams, 2015) were included in the demographic information section as a part of the questionnaire (Rigali-Oiler, 2013; Adams, 2015). To date, a specific instrument to capture the multicultural experience that takes place in the multicultural training context is still limited. Beside multicultural training experience, multicultural counselling literature focuses more on cultural immersion as a variable that represents counsellor trainees multicultural experience. However, cultural immersion experience is an experience gained and digested from a structured program outside the classroom as part of multicultural counselling training. It is a planned program that takes place in a culturally different location from counsellor trainees' familiarities. For instance, Tomlinson-Clarke and Clarke (2010) conducted a six days program with local communities in South African.

Cultural immersion experience was measured through the measurement of multicultural counselling competence and multicultural counselling self-efficacy. For instances, Barden et al. (2014) measured cultural immersion experience through measurement of multicultural counselling competence and multicultural counselling self-efficacy. Nevertheless, a study by Chaichanasakul (2011) is one of the few attempts to measure multicultural experience using a specific instrument, which is the Multicultural Experience Inventory-Revised (MEI-R; Ramirez, 1998). However, this instrument is designed to capture multicultural experience from a personal setting that is based on interaction and exposure during the formative years.

The Self-Efficacy Theory (SET) stated that mastery experience as one of the sources of self-efficacy and the Social Cognitive Theory (SCT) also mentioned that individual competency related to his or her experience, efficacy, and environment, the multicultural experience is a form of experience that should be measured (Bandura, 1977, 1986). A different set of tasks require a different ability that develops from a different experience. Therefore, multicultural experience gained during multicultural counselling course should be measured specifically. Even though most of the multicultural counselling courses were conducted according to due accreditation, a specific instrument to measure multicultural experience in an academic setting through multicultural counselling the course is needed to reflect the progress and quality of a multicultural counselling course.

In the counselling field, the instruments that merely measure counsellor trainees' multicultural experience were the Multicultural Environment Inventory-Revised (MEI-R; Pope-Davis et al., 2000) and the Multicultural Competency Checklist (MCC; Ponterotto et al., 1995). These two instruments were designed to assess the multicultural status and focus on multicultural training. The MEI-R was developed by Pope-Davis et al. (2000) to assess counselling graduate students' perception of their academic training milieu in terms of its multicultural focus. It comprises four subscales (Curriculum and Supervision, Climate and Comfort, Honesty in Recruitment, and Multicultural Research) with a total of 27 Likert-type items. In contrast, the MCC was designed to assist faculty members to assess their status with regard to providing multicultural training for their students. This 22-items instrument was intended to be completed by the director of training or the collective program faculty.

In the field of psychology, instruments such as the Multicultural Experience Questionnaire (MEXQ; Endicott, Bock, & Narvaez, 2003) Multicultural Experience Questionnaire (MEQ; Narvaez & Hill, 2010), Multicultural Experience Assessment (MExA; Aytug et al., 2018) and Multicultural Experience Inventory (MEI; Ramirez, 1998) are specifically designed to measure multicultural experiences. The MEXQ is a 105-item instrument that measures the extent of multicultural experience with and attitudinal openness toward diverse groups (Endicott et al., 2003). Narvaez and Hill (2010) developed MEQ with 15 items that measure both deliberate and incidental intercultural experience among college students. The MExA is a 10-item instrument that measures the multicultural exposure and multicultural interaction (Aytug et al., 2018). The MEXQ, MEQ and MExA were developed in the field of social psychology. Meanwhile, the MEI-R was designed from the perspective of cross-cultural psychology. It is a 26-item instrument that measures the historical development pattern and current multicultural interaction that reflect individual multicultural experience (Ramirez, 1998). All four instruments are more preferable in measuring the personal multicultural experience.

Nevertheless, the Multicultural Course Racial Experiences Inventory (MCREI) was designed specifically to measure multicultural experience gained by counsellor trainees while attending multicultural counselling course. This type of multicultural experience forms through exposure and interaction during classroom activities that are structured and planned. The MCREI was developed based on previous multicultural literature and findings from a qualitative study involving counsellor trainees who had completed a multicultural counselling course (Pieterse et al., 2016). Thus, this study chose MCREI to measure counsellor trainees' academic multicultural experience due to its ability to measure a specific multicultural experience gained by counsellor trainees from the attended multicultural counselling course. The MCREI had undergone back-to-back translation and expert validation process as this is one of the few attempts to utilize MCREI in the outer context of the US.

Therefore, this study aims to

- i. confirm the translated MCREI's factor structure
- ii. evaluate the translated MCREI's reliability
- iii. explore the descriptive nature of the translated MCREI
- iv. investigate the external and convergent validity of translated MCREI

to provide evidence of its psychometric properties for safe and proper use by educator, supervisor, practitioner, and researcher in Malaysian context specifically and any other culturally relevant context.

Methods

Participants

The participants in this study is the counsellor trainees who were completing their counselling internship training in various organizations in Klang Valley and East Malaysia. The 200 counsellor trainees were chosen through cluster random sampling. The distribution of respondents in term of age, gender, ethnicity, and religion are majored by respondents whose age are between 22 to 24 years old (n= 159, 79.5%), female (n= 159, 79.5%), Malay (n= 154, 77.0%) and Muslim (= 167, 83.5%). Table 1 presents a detailed description of the sample.

Table 1

Distribution of respondent's demographic

Demographic variables	Categories	Frequency	Percentage
Age	22-24	159	79.5
	25-27	36	18.0
	28-30	5	2.5
Gender	Male	41	20.5
	Female	159	79.5
Ethnicity	Malay	154	77.0
	Non-Malay	46	33.0
	Muslim	167	83.5
Religion	Non - Muslim	32	16.0
	No Religion	1	0.5

Material

Data were collected using the adapted and translated MCREI. It was first developed by Pieterse et al. (2016) to measure various aspects of student experiences in multicultural courses that are reflective of their racial group membership. The MCREI consists of 19 items derived from four subscales; (i) Racial Group Identification (6 items), (ii) Racial Diversity - Tension (5 items), (iii) Racial Group Saliency (4 items), and (iv) Racial Diversity - Negative Effects (4 items). All items are scored in a positive direction. The response options ranged from 1 (Strongly Agree) to 5 (Strongly Disagree), giving a range score of 19 to 95. By summing responses to all items, the total score of MCREI indicates the degree of individual's multicultural experience that he or she gain during multicultural counselling course. The adapted and translated MCREI remained all items in the Malay version.

The MCREI was reviewed and validated by a counselling psychologist who had experience in teaching multicultural courses and had a record of publications within the area. Based on the feedback, Pieterse et al. (2016) concluded that MCREI has acceptable validity. No specific number about validity was reported in the original article of MCREI. In term of reliability, Pieterse et al. (2016) reported sufficient and fair reliability for each component, (i) Racial Group Identification ($\alpha = .82$), (ii) Racial Diversity - Tension ($\alpha = .81$), (iii) Racial Group Saliency ($\alpha = .75$), and (iv) Racial Diversity - Negative Effects ($\alpha = .84$).

There are two other instruments used in this study, (i) the Multicultural Counselling and Training Survey-Revised (MCCTS-R; Holcomb-McCoy & Day-Vines, 2004), and (ii) Multicultural Counseling Self-Efficacy-Racial Diverse (MCSE-RD; Sheu, 2005).

i. MCCTS-R

The MCCTS-R consists of three subconstructs that are (i) Multicultural Terminology (4 items), (ii) Multicultural Knowledge (20 items), and (iii) Multicultural Awareness (8 items), with 32 items (Holcomb-McCoy & Day-Vines, 2004). All of the items were positively stated. The four-point Likert scale was applied in rating each item (1= Not Competent, 2= Somewhat Competent, 3 = Competent, and 4 = Very Competent), giving a score range of 32 to 128. Total score of MCCTS-R that gained from the summation of every item rating explained respondents' level of self-perceived multicultural counselling competence. Previous studies reported excellent reliability of MCSE-RD subscales and its total. For instance, α of .85 to .97 were reported by Holcomb-McCoy and Day-Vines (2004) for MCCTS-R subscales (Multicultural Terminology = .97, Multicultural Knowledge = .95, Multicultural Awareness = .85). In addition, a study by Barden and Greene (2015) reported a high reliability of .95 for full MCCTS-R.

ii. MCSE-RD

The MCSE-RD was used to measure the counselor trainees' multicultural counseling self-efficacy. The MCSE-RD consists of 37 items derived from three subscales; (i) multicultural intervention (24 items), (ii) multicultural assessment (6 items), and (iii) multicultural counseling session management (7 items). All of the items of the MCSE-RD were positively stated and were rated on a scale ranging from 0 (no confidence at all) to 9 (complete confidence). Sheu and Lent (2007) reported high reliability of .92 to .98 for MCSE-RD subscales and a α of .98 for the total MCSE-RD. In other study, Barden and Greene (2015) reported a satisfying value of reliability with Cronbach's alpha coefficient for full-scale was .94 and ranged from .89 and .95 for the subscales (Multicultural Intervention = .89, Multicultural Assessment = .87, Multicultural Session Management = .95).

Data on respondent's age, gender, ethnicity, and religion were obtained through a demographic sheet that was attached at the last page of the questionnaire.

Procedure

First of all, the researcher had been granted permission by the original author and translated version authors to use the MCREI. In this study, back-to-back translation method was used where the Malay version was used only as a guide for the translators. According to Noah (2005) suggestion. The translators were appointed based on their expertise in counselling and high proficiency in English. After getting the translated draft of MCREI, it was undergoing the pre-testing process to gain feedback on the term, phrase, and structure sentence used. As a result, there were some minor spelling errors where corrections had been made. The pre-tested draft then presented to panel of experts for content validation process. Five counselling experts were appointed based on their focus on multicultural counselling in their teaching and research.

Then, the translated MCREI was piloted on 73 counsellor trainees to build up its psychometric profiles before embarking to the actual data collection phase. Therefore, the exploratory factor analysis (EFA) was done using the pilot study data,

Exploratory Factor Analysis (EFA)

The exploratory factor analysis (EFA) is a process where data is explored and produced information about the numbers of factors that are required to represent the data. It is usually used during the early stages of research to gather information about the interrelationships among a set of variables. In this study, the EFA was done using the principal component analysis (PCA). Based on the Bartlett test of Sphericity and the Kaiser Mayer Olkin, it can be concluded that the MCREI met the requirement for the implementation of PCA.

The PCA determines the factors accounting for the total variance of the specific construct. The factor analysis revealed a 5-factor with eigenvalues above 1.0. which accounted for 66.81% of the total variance. Tabachnick and Fidell (2007) recommend factor loading greater than .30 as acceptable. The results indicate that factor loadings range from .382 to .867, which are acceptable and sufficient. Based on the results, factor 1 consists of 8 items, factor 2, 3 and 4 are all made of 3 items, and factor 5 consists of 2 items. Table 2 presents the distribution of the 19 items.

Table

The 5-factor structure and distribution of 17 items

	1	2	3	4	5
mcrei1				.707	
mcrei2				.837	
mcrei3	.495				
mcrei4			.811		
mcrei5			.672		
mcrei6	.811				
mcrei7	.867				
mcrei8	.851				
mcrei9	.382				
mcrei10				.532	
mcrei11	.622				
mcrei12		.804			
mcrei13		.810			
mcrei14		.678			
mcrei15			.543		
mcrei16					.620
mcrei17	.639				
mcrei18	.627				
mcrei19					.718

In this study, 208 counsellor trainees were recruited through cluster random sampling. At the time of the study, the counsellor trainees are at the end of their counselling internship training in various organizations around Klang Valley and East Malaysia. The instrument was e-mailed to the respondents. This study consumed four weeks duration to be accomplished and the total of 205 questionnaire were returned.

Statistical Analysis

The specific aims of this study were: (1) to confirm the factor structure of translated MCREI, (2) to evaluate the reliability of translated MCREI, (3) to identify the descriptive statistics of the MCREI, and (4) to investigate the external and convergent validity of MCREI. Data were analysed using SPSS 25 and AMOS 23 computer program based on the 200 usable responses. An alpha level of .05 was set for all the analyses.

The hypothesized factor structure model was tested by confirmatory factor analysis (CFA) using the AMOS 23. The Goodness of Fit Indexes (GFI), the comparative fit index (CFI), the incremental fit indexes (IFI), and the Root Mean Square Error of Approximation (RMSEA) are the four common fit indexes used to determine model fit (McDonald & Ho, 2002). To provide adequate evidence of model fit, a model shall fulfil the requirement of at least three fit indices (Hair et al., 2006). In addition, Hair et al. (2006) and Iacobucci (2010) suggested that the Chi Square value must be reported together with at least one absolute index (i.e., RMSEA) and one incremental index (i.e., CFI). Therefore, the Chi-Square/df, CFI, TLI, and RMSEA were selected for this study with the word of caution from Hu and Bentler (1998) where a model may still fit the data, although a couple of the fit indices presented a bad fit.

The Cronbach's Alpha with 95% confidence interval, together with the corrected item-total correlation, and Cronbach's Alpha if item deleted for each of the items were analysed in order to evaluate the reliability (internal consistency). Descriptive statistics (percentage, skewness, kurtosis, mean, and standard deviation) were calculated for all MCREI items. Differences between gender and ethnicity were tested using independent sample t-tests with effect sizes of based on guidelines by Cohen (1988), .01 = small effect, .06 = moderate effect, .14 = large effect.

In addition, the convergent validity was measured through factor loading and Average Variance Extracted (AVE). For a measurement to be valid, the cut off value for factor loading should be .50 or higher where at a minimum, all factor should be statistically significant (Hair et al., 2006).

Result**The Four-Factor Structure**

A confirmatory factor analysis (CFA) was performed using a hypothetical model with five factors as generated from the EFA. As shown in Figure 1 the fit index was [$\chi^2(151) = 484.742$, $p = .000$, $\chi^2/df = 3.210$, $CFI = .794$, $TLI = .767$, $RMSEA = .105$]. None of the fit indices achieved at least .85 and RMSEA smaller than the cut-off point 1.00 (Awang et al., 2018). The CFA proposes links or correlations between the observed indicator variables and the underlying latent variables that they are designed to measure; then it tests them against the data to 'confirm' the proposed factorial structure (Wang & Wang, 2012). In this procedure, CFA eliminates the need to summate scales and allow relationships between constructs to be automatically corrected for the amount of error variance that exists in the construct's measures.

As the result, Figure 2 presents the second order CFA model indicated that 12 items of four factors were retained because of their satisfactory factor loading ranged from .60 to .90. The other 5 items and factor 5 were eliminated from the construct because of low factor loadings

(less than .50) and due to large MI. The result shows that fit index [χ^2 (53) = 120.065, $p = .000$, $\chi^2/df = 2.265$, CFI = .936, TLI = .920, RMSEA = .080]. As result show, all fit indices achieved .85 and RMSEA smaller than the cut -off point 1.00 (Awang et al., 2018). The values obtained were generally within a permissible range where these reflect the same three factors as in the original version. Therefore, the first hypothesized model has achieved a good overall fit.

The second model resulted in fair fit indices and statistically significant factor loadings, both for the total sample and for the subsamples divided by the variables of gender and ethnicity. Testing the gender invariance of the adapted model (Table 3) by multigroup analysis across gender with factor loadings freely estimated demonstrated a good fit to the data [χ^2 (107) = 188.501, $p = .000$, $\chi^2/df = 1.762$, CFI = .925, TLI = .907, RMSEA = .062]. The same can be said for model invariance regarding ethnicity (Table 3), freely estimated factor loadings also demonstrated an excellent fit to the data data [χ^2 (107) = 246.643, $p = .000$, $\chi^2/df = 2.305$, CFI = .875, TLI = .846, RMSEA = .081].

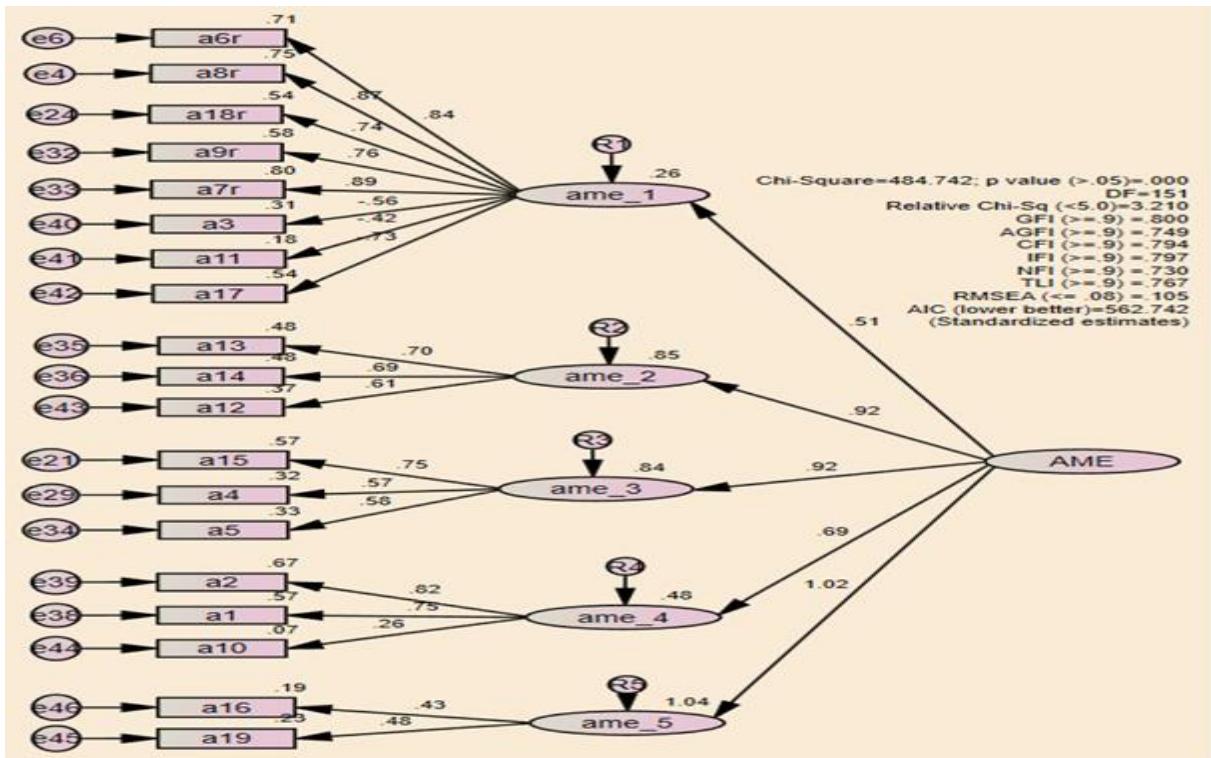


Figure 1. CFA model of original MCREI for total sample

Figure 2. CFA Model of Translated MCREI for total sample

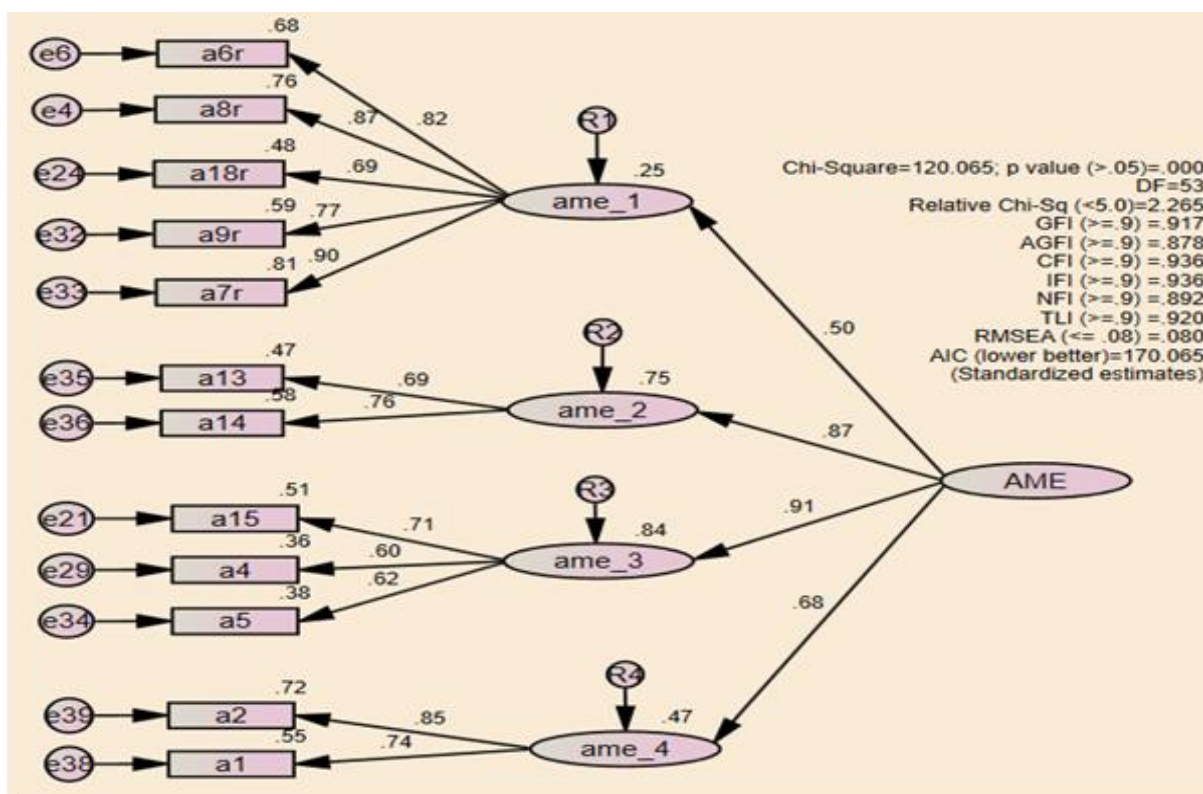


Table 3
Fit Indices for models presented in Figure 1 and 2

Model	Sample	CFI	TLI	RMSEA
Model 1	Total sample	.820	.792	.108
Model 2	Total sample	.936	.920	.080
	Male subsample	.925	.907	.062
	Female subsample	.925	.907	.062
	Malay subsample	.875	.846	.081
	Non-Malay subsample	.875	.846	.081

Internal Consistency

Finding shows that total MCREI instrument has high internal consistency with Alpha Cronbach coefficient value, $\alpha = .842$ (Table 4). Internal consistency values of all factors are relatively high where they range from .728 to .893.

Table 4
Internal consistency of MCREI

Factor	No. of Item after CFA	Alpha Cronbach (α)
1	5	.893
2	2	.803
3	3	.728
4	2	.823
Total	12	.842

Construct Reliability

Construct reliability refers to the extent to which the indicator presents the measured latent construct (Hair et al., 2006). It is gained by computing the squared sum of factor loadings for each construct and the sum of the error variance terms for a construct. The reliability with value .70 or higher considers as a good reliability. The MCREI gains a satisfactory reliability with CR = .837 which means it demonstrates highly significant correlation between items of the construct. High construct reliability indicates that the measures all consistently represent the same latent (Hair et al., 2006).

Descriptive Statistics

The mean, standard deviation, skewness, and kurtosis of each item are presented in Table 5. The mean ranges from 3.616 to 4.225 and standard deviation ranges from .805 to 1.072. Based on the skewness and kurtosis, the items are normally distributed as the values of skewness and skewness are within ± 2.00 and ± 7.00 .

Table 5

Descriptive statistics of MCREI

Item	Mean	Std. Deviation	Skewness	Kurtosis
mcrei6	4.150	1.031	-.944	-.141
mcrei7	4.225	1.005	-1.005	-.147
mcrei8	4.130	1.072	-.880	-.331
mcrei9	3.875	1.071	-.419	-.948
mcrei18	3.825	1.072	-.559	-.643
mcrei13	3.703	.849	-.283	.014
mcrei14	3.688	.859	-.359	.259
mcrei4	3.702	.813	-.078	-.534
mcrei5	3.854	.823	-.596	.608
mcrei15	4.050	.819	-.648	.292
mcrei1	3.616	.927	-.575	.598
mcrei2	3.653	.805	-.160	-.113

Table 6 presents the findings of descriptive statistics measures of each scale used in the study. Results show that all the scales used in the study have adequate internal consistency (α) on the current sample.

Table 6

Descriptive statistics measures of scales used in the study

Scale		Mean	Std. Deviation	Skewness	Kurtosis	α
MCSE-RD	Factor 1	5.738	1.418	5.738	1.418	.942
	Factor 2	6.241	1.399	6.241	1.399	.959
	Factor 3	5.484	1.456	5.484	1.456	.876
MCCTS-R	Factor 1	2.497	.558	2.497	.558	.935
	Factor 2	2.611	.549	2.611	.549	.872
	Factor 3	2.563	.591	2.563	.591	.906

* α = Cronbach's Alpha coefficient

Table 7 presents the differences sample t-tests. Findings show that there is no significant difference in MCREI for male (M = 3.832, SD = .601) and female [M = 3.805, SD = .521; t (198) = .286, p = .775]. The magnitude of the differences in the means was very small (eta squared = .000) between gender was tested using Independent T-Test.

Table 7

Mean difference of MCREI and its 4 factors according to gender

	Gender	N	Mean	Std. Deviation	t	df	Sig. 2 tailed																																												
Factor 1	Male	41	4.102	.872	.501	198	.617																																												
	Female	159	4.025	.883				Factor 2	Male	41	3.732	.822	.344	198	.731	Female	159	3.687	.730	Factor 3	Male	41	3.943	.586	.819	198	.414	Female	159	3.850	.667	Factor 4	Male	41	3.549	.947	-.681	52.673	.499	Female	159	3.657	.725	Total	Male	41	3.832	.601	.286	198	.775
Factor 2	Male	41	3.732	.822	.344	198	.731																																												
	Female	159	3.687	.730				Factor 3	Male	41	3.943	.586	.819	198	.414	Female	159	3.850	.667	Factor 4	Male	41	3.549	.947	-.681	52.673	.499	Female	159	3.657	.725	Total	Male	41	3.832	.601	.286	198	.775	Female	159	3.805	.521								
Factor 3	Male	41	3.943	.586	.819	198	.414																																												
	Female	159	3.850	.667				Factor 4	Male	41	3.549	.947	-.681	52.673	.499	Female	159	3.657	.725	Total	Male	41	3.832	.601	.286	198	.775	Female	159	3.805	.521																				
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	Female	159	3.805	.521																																															

**p<.01, * p<.05

Table 8 presents the differences between ethnicity was tested using independent sample t-tests. Findings show that there is a significant difference in MCREI scores for Malay (M = 3.859, SD = .519) and Non-Malay [M = 3.645, SD = .568; t (198) = 2.403, p = .017]. The magnitude of the differences in the means was small (eta squared = .028).

Table 8

Mean difference of MCREI and its 4 factors according to ethnicity

	Gender	N	Mean	Std. Deviation	t	df	Sig. 2 tailed																																												
Factor 1	Malay	154	4.078	.865	1.087	198	.278																																												
	Non-Malay	46	3.917	.923				Factor 2	Malay	154	3.761	.761	2.271	198	.024	Non-Malay	46	3.478	.666	Factor 3	Malay	154	3.914	.650	1.808	198	.072	Non-Malay	46	3.717	.636	Factor 4	Malay	154	3.685	.800	1.679	198	.095	Non-Malay	46	3.467	.662	Total	Malay	154	3.859	.519	2.403	198	.017
Factor 2	Malay	154	3.761	.761	2.271	198	.024																																												
	Non-Malay	46	3.478	.666				Factor 3	Malay	154	3.914	.650	1.808	198	.072	Non-Malay	46	3.717	.636	Factor 4	Malay	154	3.685	.800	1.679	198	.095	Non-Malay	46	3.467	.662	Total	Malay	154	3.859	.519	2.403	198	.017	Non-Malay	46	3.645	.568								
Factor 3	Malay	154	3.914	.650	1.808	198	.072																																												
	Non-Malay	46	3.717	.636				Factor 4	Malay	154	3.685	.800	1.679	198	.095	Non-Malay	46	3.467	.662	Total	Malay	154	3.859	.519	2.403	198	.017	Non-Malay	46	3.645	.568																				
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**p<.01, * p<.05

Convergent Validity

The convergent validity refers to the items of indicators of a specific construct should converge or share a high proportion of variance in common (Hair et al., 2006). Beside construct reliability, the CFA also allows for convergent validity testing. It can be measured

through factor loading and Average Variance Extracted (AVE). For a measurement to be valid, the cut off value for factor loading shall be above .40 (Douka et al., 2009). However, standardized loading estimates should be .50 or higher where at a minimum, all factor should be statistically significant (Hair et al., 2006). The results of CFA show that factor loadings for each observed item was higher than .50 and AVE met the criterion of .50 (AVE = .574). Therefore, convergent validity is achieved for the MCREI.

The second model resulted in fair fit indices and statistically significant factor loadings, both for the total sample and for the subsamples divided by the variables of gender and ethnicity. Testing the gender invariance of the adapted model (Table 3) by multigroup analysis across gender with factor loadings freely estimated demonstrated a good fit to the data [χ^2 (107) = 188.501, $p = .000$, $\chi^2/df = 1.762$, CFI = .925, TLI = .907, RMSEA = .062]. The same can be said for model invariance regarding ethnicity (Table 3), freely estimated factor loadings also demonstrated an excellent fit to the data data [χ^2 (107) = 246.643, $p = .000$, $\chi^2/df = 2.305$, CFI = .875, TLI = .846, RMSEA = .081].

Discussion

This study aimed to investigate the psychometric properties of MCREI in term of its factor structure, reliability and validity within the cultural context of Malaysia. The study focused on the evaluation of the hypothesized structure of MCREI and on the invariance of the adapted model across gender and ethnicity groups on a sample of Malaysian counsellor trainees. The tested four-factor structure of the MCREI was confirmed by the CFA on the total sample and two subsamples (e.g., gender and ethnicity). This finding supports the original paper. There were limited published evidence regarding MCREI factor structure except for the original paper by Pieterse et al. (2016). We did not manage to find related evidence from other studies which would potentially strengthen this finding. However, this study has confirmed MCREI's factor structure in the context of Malaysia and this may be the start for MCREI to be tested and used in other cultural contexts.

One of the purposes of this study is to evaluate the reliability and validity of MCREI in precisely measuring counsellor trainees academic multicultural experience during attending multicultural counselling course. The result shows that the translated and adopted MCREI has produced high internal consistency with an Alpha Cronbach value that is .842. Based on the coefficient values obtained, it proved that MCREI has high internal consistency. This indicates that the instrument shows high consistency of the scores obtained from one administration of an instrument to another (Fraenkel et al., 2015). Pieterse et al. (2016) also reported a high-reliability coefficient value. For instances, they reported α range from .75 to .84 for its subscales. Therefore, it can be concluded that items in MCREI are able to measure the intended construct and produce consistent scores.

This study also investigates the construct reliability in making sure the revised MCREI has stable consistency. According to Hair et al. (2006), construct reliability refers to the degree to which the construct indicators represent the latent construct. Hair et al. (2006) also maintained that high construct reliability reflects good internal consistency. A value between .60 and .70 may be acceptable. Meanwhile, the value of .70 or higher suggests good reliability. In this study, findings from CFA show that the construct reliability is high with CR = .837. This implicates that MCREI's items are all consistently representing the same latent construct.

The mean scores for MCREI subscales indicate that counsellor trainees in this study have high academic multicultural experience. This finding reflects that the counsellor trainees gained high multicultural exposure and interaction during attending multicultural counselling course. This also means that the content and activities during the classroom are sufficient and meaningful to the counsellor trainees. This study also found that factor 2 and total MCREI's mean are significantly different according to ethnicity which implies that Malay and Non-Malay counsellor trainees gained multicultural experience differently in multicultural counselling course. This is in line with Pieterse et al. (2016) which students of Color were found to score higher in two factors of MCREI.

A valid and reliable instrument is needed in order for the researcher to draw a legitimate inference. Validity refers to the extent to which a concept is accurately measured (Heale & Twycross, 2015). In this study, the convergent validity was represented by the factor loading and Average Variance Extracted (AVE). A significant loading could still be fairly weak in strength, a good rule of thumb is standardized loading estimates should be .50 or higher. Douka et al. (2009) suggested that in order for a measurement to be valid, the cut off value for factor loading shall be above .40. At a minimum, all factor should be statistically significant.

Another indicator of convergent validity is AVE. It is a summary indicator of convergence that can be calculated using standardized loadings. AVE is computed as the total of all standardized factor loadings (squared multiple correlations) divided by the number of items. In other words, it is the average squared factor loading. According to Fornell and Lacker (1981), $AVE > 0.5$ reflects high convergent validity. This requires high loadings on a factor which would indicate that they converge on some common points. As in this study, the convergent validity is .574. This value indicates that the model of MCREI's uni-dimensionality has been obtained. In addition, MCREI was also found to have sufficient external validity. This is reflected by an adequate significant correlation between MCREI subscales with MCSE-RD and MCCST-R subscales.

Conclusion

The confirmed factor structure, high reliability, and sufficient validity portray MCREI's ability to measure precisely counsellor trainees' multicultural experience in academic setting during multicultural counselling course. In establishing external validity, its significant relationship with multicultural counselling self-efficacy and perceived multicultural counselling competence provides information for more clearer understanding of multicultural counselling competence development. For further exploration on the MCREI psychometric properties, the study may be conducted by involving different sample and context.

Academic multicultural experience is derived from the multicultural experience that can be regarded as the contact between individuals of different groups as premised in the Contact Theory by Allport (1954). It is also can be regarded as a collected cross-cultural experience encounter by Narvaez and Hill (2010). In addition, the SET and SCT also mentioned the relation of experience, efficacy, and the environment with individual's competency in which highlights that a different set of tasks require a different ability that develops from a different experience. Thus, the findings of the reliability and validity of the translated MCREI contributed to the understanding of one of the major sources of self-efficacy, mastery experience, from the multicultural lens. Furthermore, the retained items provide the

reflection of the teaching and learning activities implemented by course instructors that left significant impressions and experiences to the counsellor trainees.

Declaration

The author (s) professed no potential circumstances with regard to the research, authorship, and/or publication of this article. Reprinted or reused by permission of the first author.

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